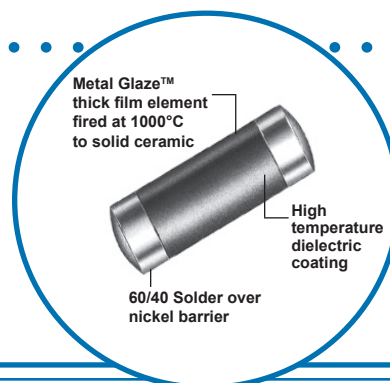


## METAL GLAZE™ GENERAL PURPOSE SURFACE MOUNT SURGE RESISTOR

- Up to triple the surge rating of the rugged CHP1
- Replaces costly surface-mount wirewound resistors
- 150°C maximum operating temperature
- 1 Watt power rating
- ROHS - Compatible Components Available



### HSF-1 SPECIFICATIONS:

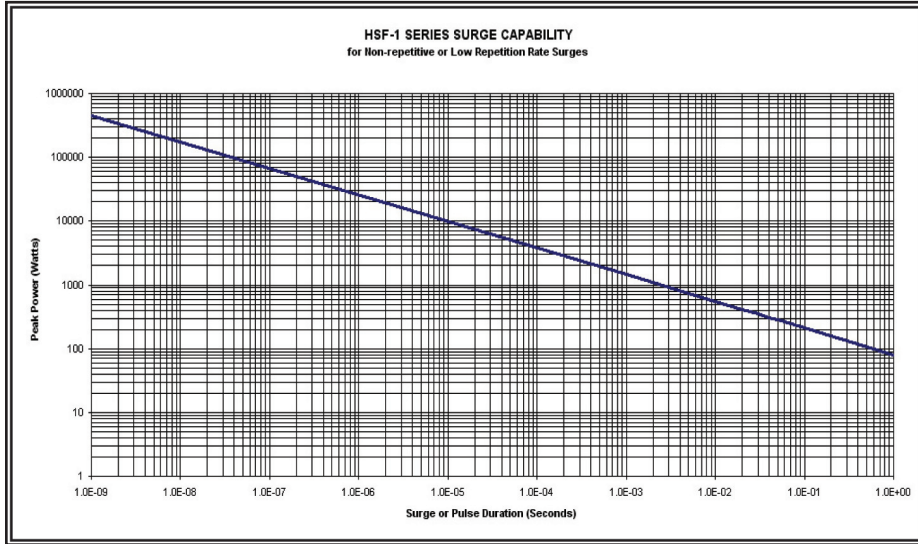
Size Code	Industry Footprint	IRC Type	Maximum Power Rating	Working Voltage	Maximum Voltage	Resistance Range (Ω)	Tolerance (±%)	TCR (ppm/°C)	Product Category
F	2512	HSF-1	1W @ 70°C	350	*	*	10	±50, ±100	High Surge

Note\*: Consult factory for available resistance values and maximum voltage.

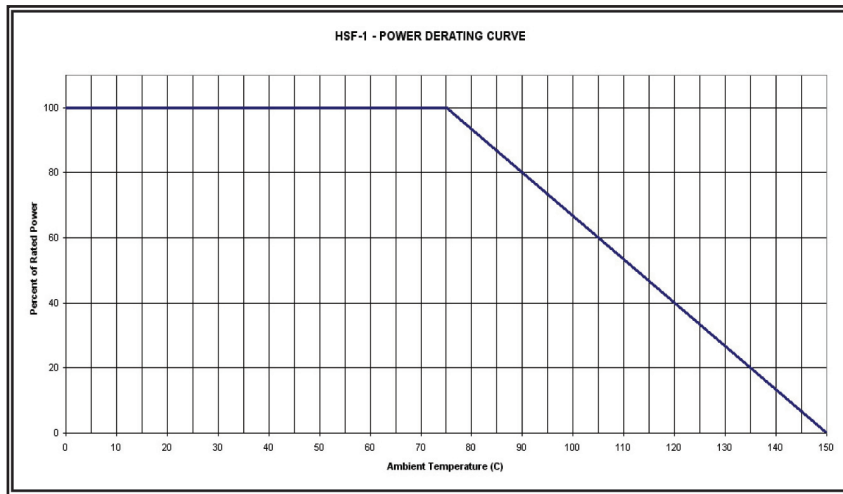
### HSF-1 PERFORMANCE CHARACTERISTICS:

Characteristics	Maximum Change	Test Method
Temperature Coefficient	As specified	MIL-R-55342E Par 4.7.9 (-55°C +125°C)
Thermal Shock	±0.5% +0.01 ohm	MIL-R-55342E Par 4.7.3 (-65°C +150°C, 5 cycles)
Low Temperature Operation	±0.25% +0.01 ohm	MIL-R-55342E Par 4.7.4 (-65°C @ working voltage)
Short Time Overload	±0.5% +0.01 ohm	MIL-R-55342E Par 4.7.5 2.5 x $\sqrt{\quad}$ for 5 seconds
High Temperature Exposure	+0.5 +0.01 ohm	MIL-R-55342E Par 4.7.6 (+150°C for 100 hours)
Resistance to Bonding	±0.25% 0.01 ohm	MIL-R-55342E Par 4.7.7 (Reflow soldered to board at 260°C for 10 seconds)
Exposure	95% minimum coverage	MIL-STD-202, Method 208 (245°C for 5 seconds)
Solderability	±0.5% +0.01 ohm	MIL-R-55342E Par 4.7.8 (10 cycles, total 240 hours)
Moisture Resistance	±0.5% +0.01 ohm	MIL-R-55342E Par 4.7.10 (2000 hour at 70°C intermittent)
Life Test	±1% +0.01 ohm	1200 gram push from underside of mounted chip for 60 seconds
Terminal Adhesion Strength	no mechanical damage	
Resistance to Board Bending	±1% + 0.01 ohm no mechanical damage	Chip mounted in center of 90mm long board, deflected 5mm so as to exert pull on chip contacts for 10 seconds

## HSF-1 SURGE CAPABILITY DATA:



## HSF-1 POWER DERATING DATA:



Note: Use for low repetitive pulses where the average power dissipation is not to exceed the component rating at 70°C. Surge handling capacity for low-repetitive surges may be significantly greater than shown above. Contact factory

## Ordering Data:

Sample Part No.

**HSF-1 - 100 - 11R0 - K - LF - 13**

IRC Type  
(HSF-1)

Temperature Coefficient  
(50 =  $\pm 50\text{ppm}/^\circ\text{C}$ ; 100 =  $\pm 100\text{ppm}/^\circ\text{C}$ )

Resistance Value  
Standard 4-digit resistance code. Consult factory for available values.

Tolerance  
(K = 10%)

Lead-Free Construction

Packaging Code  
(BLK = Bulk, 7=7" Reel, 13=13" Reel)

### General Note

IRC reserves the right to make changes in product specification without notice or liability. All information is subject to IRC's own data and is considered accurate at time of going to print.

### WIREWOUND AND FILM TECHNOLOGIES DIVISION

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